

SI Table 1. Summary of subsurface sample locations, depth of sample collection, times (phases) of sampling, target analytes, laboratories utilized, and analytical methods used for the Pavillion Ground-Water Investigation

Sample	latitude	longitude	Depth (m bgs)	Type	Media	major anions and alkalinity	metals	Alocohols and VOCs	low molecular weight acids, glycols	SVOCs	Pesticides	GRO, DRO, THE, TPH	Bacteria	fixed gases, C ₁ -C ₆ t, δ ¹³ C and δD C ₁ -C ₄ DOC DIC, δ ¹³ C DIC δ ¹⁸ O and δD water
PGPP01 (Tribal Pavillion 14-10)	43.24578857	-108.6356735		PG	gas/ fluid	-----	-----	II(R8 ²)	-----	II(R8 ³)	II(R8 ⁴)	-----	II(I ¹)	
PGPP02	43.2486496	-108.6274796		PG	gas	-----	-----	-----	-----	-----	-----	-----	-----	II(I ¹)
PGPP04 (Tribal Pavillion 24-02)	43.25984955	-108.6116409		PG	gas/ fluid	-----	-----	II(R8 ²)	-----	II(R8 ³)	II(R8 ⁴)	-----	II(I ¹)	
PGPP05 (Tribal Pavillion 33-10)	43.2486496	-108.6274796		PG	gas/ fluid	-----	-----	II(R8 ²)	-----	II(R8 ³)	II(R8 ⁴)	-----	II(I ¹)	
PGPP06 (Tribal Pavillion 14-2)	43.26016998	-108.6165009		PG	gas/ fluid	-----	-----	II(R8 ²)	-----	II(R8 ³)	II(R8 ⁴)	-----	II(I ¹)	
MW01	43.25682	-108.62185	233 - 239	MW	gas/ water	III(O ¹) IV(O ¹)	III(S ¹) IV(S ¹)	III(R8 ² ,S ²) IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	III(R8 ³) IV(R8 ³)	III(R8 ⁴) IV(R8 ⁴)	-----	III(I ² ,I ² ,O ² , S ⁵ ,S ⁶) IV(I ³ ,I ⁴ ,O ² , S ⁵ ,S ⁶)	
MW02	43.25293	-108.59468	293 - 299	MW	gas/ water	III(O ¹) IV(O ¹)	III(S ¹) IV(S ¹)	III(R8 ² ,S ²) IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	III(R8 ³) IV(R8 ³)	III(R8 ⁴) IV(R8 ⁴)	-----	III(I ² ,I ² ,O ² , S ⁵ ,S ⁶) IV(I ³ ,I ⁴ ,O ² , S ⁵ ,S ⁶)	
PGMW01 (Pit 24-3/1)	43.26122665	-108.6316147	4.6	PGM	water	II(R8 ¹)	II(A4)	II(A,R8 ²)	-----	II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(R8 ⁵)	
PGMW02 (Pit 14X-11#6)	43.24616241	-108.613205	4.6	PGM	water	II(R8 ¹)	II(A4)	II(A,R8 ²)	-----	II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(R8 ⁵)	
PGMW03 (Pit 42X-11#4)	43.25263977	-108.6020584	4.6	PGM	water	II(R8 ¹)	II(A4)	II(A,R8 ²)	-----	II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(R8 ⁵)	
PGSO01 (Pit 24-3)	43.26117325	-108.6316071	< 5	PGS	soil	-----	-----	-----	-----	II(R8 ³)	II(E ² ,R8 ⁴)	-----	-----	
PGSO02 (Pit 14X-11)	43.24636841	-108.6135254	< 5	PGS	soil	-----	-----	-----	-----	II(R8 ³)	II(E ² ,R8 ⁴)	-----	-----	
PGSO03 (Pit 42X-11)	43.2527504	-108.6022339	< 5	PGS	soil	-----	-----	-----	-----	II(R8 ³)	II(E ² ,R8 ⁴)	-----	-----	
PGDW01	unknown	unknown	-----	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)				
PGDW02	43.21848912	-108.5783117	15.2	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)				
PGDW03	43.22721318	-108.6584107	152.4	DW	water	I(R8 ¹)	I(K), II(A4)	I(L), II(A,R8 ²)		I(L,R8 ³) II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(I ¹ ,R8 ⁵)	
PGDW04	43.22790981	-108.6542063	152.4	DW	water	I(R8 ¹) II(R8 ¹)	I(K), II(A4)	I(L), II(A,R8 ²)		I(L,R8 ³) II(A,R8 ³)	I(E ²) II(E ² ,R8 ⁴)	I(E ¹) II(E ¹)	I(R8 ⁵) II(I,R8 ⁵)	
PGDW05	43.25884666	-108.6126481	64.0	DW	water	I(R8), II(R8) IV(O ¹)	I(K) II(A4) IV(S ¹)	I(L) II(A,R8 ²) IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	I(L,R8 ³) II(A,R8 ³) IV(R8 ³)	I(E ²) II(E ² ,R8 ⁴) II(E ¹)	I(E ¹) II(E ¹)	I(R8 ⁵) II(R8 ⁵) IV(I ² ,O ² ,O ³ ,S ⁶)	
PGDW06	43.27110813	-108.5599211	115.8	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)				
PGDW07	43.24678442	-108.6879085	154.2	PGP	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			I(R8 ⁵)	
PGDW08	43.24697265	-108.6840567	157.0	PGP	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)				
PGDW09	43.27211644	-108.615144	9.1	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)				
PGDW10	43.23574855	-108.6563896	227.1	DW	water	I(R8 ¹)	I(K) II(A4)	I(L) II(A,R8 ²)		I(L,R8 ³) II(A,R8 ³)	I(E ²) II(E ² ,R8 ⁴)	II(E ¹)	I(R8 ⁵) II(I,R8 ⁵)	
PGDW11	43.24312049	-108.6228628	227.1	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)				

PGDW12	43.27628927	-108.5661502	115.8	DW	water	I(R8 ¹)	I(K)	I(L.)		I(L,R8 ³)			
PGDW13	43.2444467	-108.6772771	-----	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW14	43.25154027	-108.6273311	57.9	DW	water	I(R8 ¹)	I(K)	I(L), IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	I(L,R8 ³)			IV(O ³ ,S ⁶)
PGDW15	43.24312129	-108.6671791	30.5	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW16	43.20381363	-108.6405183	161.5	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW17	43.20416653	-108.6368713	152.4	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			I(R8 ⁵)
PGDW18	43.22491388	-108.569651	67.1	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW19	43.21382469	-108.651274	19.8	DW	water	I(R8 ¹)	I(K)	I(L.)		I(L,R8 ³)			
PGDW20	43.25166961	-108.5912756	140.2	DW	water	I(R8 ¹) II(R8 ¹) III(O ¹) IV(O ¹)	I(K), II(A4) III(S ¹) IV(S ¹)	I(L) II(A,R8 ²) III(R8 ² ,S ²) IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	I(L,R8 ³). II(A,R8 ³) III(R8 ³) IV(R8 ³)	I(E ²) II(E ² ,R8 ⁴) III(R8 ⁴) IV(R8 ⁴)	I(E ¹) II(E ¹)	I(R8 ⁵) II(R8 ⁵) III(I ² , O ² , S ⁵ ,S ⁶) IV(I ² , O ² , S ⁵ ,S ⁶)
PGDW21	43.25167095	-108.5912762	140.2	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			I(R8 ⁵)
PGDW22	43.24452934	-108.5981513	-----	DW	water	I(R8 ¹) II(R8 ¹)	I(K) II(A4)	I(L) II(A,R8 ²)		I(L,R8 ³); II(A,R8 ³)	I(E ²) II(E ² ,R8 ⁴)	I(E ¹) II(E ¹)	I(R8 ⁵) II(R8 ⁵)
PGDW23	43.24866472	-108.6225943	152.4	DW	water	I(R8 ¹) II(R8 ¹)	I(K) II(A4)	I(L) II(A,R8 ²), IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	I(L,R8 ³) II(A,R8 ³) IV(R8 ³) I(L,R8 ³)	I(E ²) II(E ² ,R8 ⁴)	I(E ¹) II(E ¹)	I(R8 ⁵) II(LR8 ⁵) IV(S ⁵ ,S ⁶)
PGDW24	43.25877211	-108.6015059	30.5	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW25	43.25558722	-108.5694867	243.8	DW	water	I(R8 ¹) II(R8 ¹)	I(K), II(A4)	I(L), II(A,R8 ²)		I(L,R8 ³), II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(I ¹ ,R8 ⁵)
PGDW26	43.25512275	-108.6132115	19.8	DW	water	I(R8 ¹), IV(O ¹)	I(K)	I(L), IV(R8 ² , S ³)	IV(S ⁴ ,R3)	I(L,R8 ³) IV(R8 ³)	IV(R8 ⁴)		I(R8 ⁵) IV(I ² , O ² , O ¹ ,S ⁶)
PGDW28	43.23993143	-108.6465688	25.9	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW29	43.21773909	-108.6288449	121.9	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)	I(E ²)		I(R8 ⁵)
PGDW30	43.25753218	-108.6225755	79.2	DW	water	I(R8 ¹) II(R8 ¹) III(O ¹) IV(O ¹)	I(K), II(A4) III(S ¹) IV(S ¹)	I(L) II(A,R8 ²) III(R8 ² ,S ²) IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	I(L,R8 ³), II(A,R8 ³) III(R8 ³) IV(R8 ³)	II(E ²) III(R8 ⁴) IV(R8 ⁴)	II(E ¹)	I(R8 ⁵) II(R8 ⁵) III(I ² , O ² , S ⁵ ,S ⁶) IV(I ² , O ² , S ⁵ ,S ⁶)
PGDW31	43.27302485	-108.6615302	-----	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW32	43.24075256	-108.5941561	205.7	DW	water	I(R8 ¹) II(R8 ¹) IV(O ¹)	I(K), II(A4), IV(S ¹)	I(L) II(A) IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	I(L,R8 ³), II(A,R8 ³) IV(R8 ³)	II(E ² ,R8 ⁴) IV(R8 ⁴)	II(E ¹)	I(R8 ⁵) II(R8 ⁵) IV(I ² , O ² , O ¹ ,S ⁶)
PGDW33	43.23855522	-108.5964146	9.1	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW34	43.23605297	-108.6058086	30.5	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW35	43.23021564	-108.6241763	88.4	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			I(R8 ⁵)
PGDW36	43.25905726	-108.5987059	30.5	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)	I(E ²)		
PGDW37	43.24016136	-108.6585376	24.4	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)			
PGDW38	43.2296203	-108.572037	48.8	DW	water	I(R8 ¹)	I(K)	I(L)		I(L,R8 ³)	I(E ²)		I(R8 ⁵)
PGDW39	43.23750687	-108.5781708	6.1	DW	water	I(L) II(R8 ¹)	I(L), II(A4)	I(L), II(A,R8 ²)		I(L,R8 ³), II(A,R8 ³)		II(E ¹)	
PGDW40	43.26156616	-108.6198273	67.1	DW	water	II(R8)	II(A4)	II(A,R8 ²)		II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	III(I ¹ ,R8 ⁵)
PGDW41	43.262146	-108.6378479	114.6	DW	water	II(R8), IV(O ¹)	II(A4)	II(A,R8 ²), IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	II(A,R8 ³)	II(E ² ,R8 ⁴), IV(R8 ⁴)	II(E ¹)	II(I ¹ ,R8 ⁵) IV(I ² ,S ⁵ ,S ⁶)
PGDW42	43.25574493	-108.647316	61.0	DW	water	II(R8 ¹)	II(A4)	II(A,R8 ²)		II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(I ¹ ,R8 ⁵)

PGDW43	43.25749207	-108.64151	-----	DW	water	II(R8 ¹)	II(A4)	II(A,R8 ²)		II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(I ¹ ,R8 ⁵)
PGDW44	43.25086975	-108.6261292	228.6	DW	water	II(R8)	II(A4)	II(A,R8 ²), IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	II(A,R8 ³), IV(R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(R8 ⁵) IV(I ² ,O ³ ,S ⁶)
PGDW45	43.25888062	-108.6130142	-----	DW	water	II(R8), IV(O ¹)	II(A4)	II(A,R8 ²), IV(R8 ² ,S ³)	IV(S ⁴ ,R3)	II(A,R8 ³) IV(R8 ³)	II(E ² ,R8 ⁴), IV(R8 ⁴)	II(E ¹)	II(R8 ⁵) IV(I ² ,O ² ,O ³ ,S ⁶)
PGDW46	43.24651337	-108.6157684	14.6	DW	water	II(R8 ¹)	II(A4)	II(A,R8 ²)		II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(I ¹ ,R8 ⁵)
PGDW47	43.24520493	-108.6319885	147.5	DW	water	II(R8 ¹)	II(A4)	II(A,R8 ²)		II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(I ¹ ,R8 ⁵)
PGDW48	43.2299881	-108.6235733	-----	DW	water	II(R8 ¹)	II(A4)	II(A,R8 ²)		II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(R8 ⁵)
PGDW49	43.25505829	-108.6178741	-----	DW	water	II(R8 ¹)	II(A4)	II(A,R8 ²), IV(R8 ² ,S ³)		II(A,R8 ³) IV(R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(R8 ⁵) IV(I ² ,O ³ ,S ⁶)
PGPW01	43.24678802	-108.6879349	~ 154	PGP	water	II(R8 ¹)	II(A4)	II(A,R8 ²)		II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(I ¹ ,R8 ⁵)
PGPW02	43.24697113	-108.6840515	~ 154	PGP	water	II(R8 ¹)	II(A4)	II(A,R8 ²)		II(A,R8 ³)	II(E ² ,R8 ⁴)	II(E ¹)	II(I ¹ ,R8 ⁵)
LD-02	43.25167095	-108.5912762	185.9	DW	water	III(O ¹)	III(S ¹)	III(S ²)		III(R8 ³)			III(I ² ,O ² , S ⁵ ,S ⁶)

Abbreviations

I () - Phase I(laboratory/method). Samples collected March, 2009
 II() - Phase II(laboratory/method). Samples collected January, 2010
 III() - Phasc III(laboratory/method). Samples collected September and October 2010
 IV() - Phase IV(laboratory/method). Samples collected April 2011.
 PG - gas production well
 MW - deep monitoring wells
 PGM - shallow monitoring wells near pits
 PGS - soil samples near pits
 DW - domestic wells
 PGP - municipal wells in the Town of Pavillion

VOCs - volatile organic compounds
 SVOCs - semivolatile organic compounds
 PCBs - polychlorinated biphenyls
 TICs - tentatively identified compounds
 DRO - diesel range organics
 GRO - gasoline range organics
 TEH - total extractable hydrocarbons
 TPH - total purgeable hydrocarbons
 DIC - dissolved inorganic carbon
 TAL - target analyte list
 CLP - U.S. EPA Contract Laboratory Program

C₁-C6⁺ - C₁ (methane), C₂ (ethane), C₃ (propane), iC₃ (isobutane), nC₄ (normal butane), iC₅ (isopentane), nC₅ (normal pentane), C₆⁺ (hexanes + other light hydrocarbons)

Laboratories, Analytes, and Methods

A - ALS Laboratory Group, Salt Lake City, UT (VOCs, SVOCs, pesticides, TCBs, TICs determined using methods specified under the CLP)
 A4 - A4 Scientific, The Woodlands, TX (TAL metals determined using methods specified under the CLP)
 E¹ - Energy Laboratories Inc., Billings, MT (Heterotrophic Plate Counts, Iron Reducing Bacteria, Sulfur Reducing Bacteria)
 E² - Energy Laboratories Inc., Billings, MT (GRO, DRO, THE, TPH)
 I¹ - Isotech Laboratories, Champaign, IL, under contract by EnCana (fixed gases, C1-C6+, δ13C & δD for C1 for water samples, δ13C & δD for C1-C4 for gas samples using Isotech SOP 100v0, 101v0, 103v0, 104v0, 111v0)
 I² - Isotech Laboratories, Champaign, IL, under contract by EPA (fixed gases, δ13C and δD for C1, δ13C DIC using Isotech SOP 100v0, 101v0, 103v0, 104v0, 111v0, 112v2)
 I³ - Isotech Laboratories, Champaign, IL, under contract by EPA (fixed gases, C1-C6+, δ13C for C1 - C4, δD for C1 - C4, δ13C, DIC for water samples using Isotech SOP 100v0, 101v0, 103v0, 104v0, 111v0, 112v2)
 I⁴ - Isotech Laboratories, Champaign, IL, under contract by EPA (fixed gases, C1-C6+, δ13C for C1 - C4, δD for gas samples using Isotech SOP 100v0, 101v0, 103v0, 104v0, 111v0)
 I⁵ - Isotech Laboratories, Champaign, IL, under contract by EPA (fixed gases, C1-C6+, δ13C and δD for C1 - C4, ¹⁴C for C1 for gas samples using Isotech SOP 100v0, 101v0, 103v0, 104v0, 111v0 and Isotech (Beta Analytic))
 K - KAP Laboratories, Vancouver, WA under contract to U.S. EPA Contract Laboratory Program (TAL metals)
 L - Liberty Analytical, Salt Lake City, UT (VOCs, SVOCs, PCBs, TICs determined using methods specified under the CLP)
 O¹ - EPA, ORD, Ada, OK (SO₄, Cl, F, Br using RSKSOP 276v3 and NO₃ + NO₂, NH₄ using RSKSOP 214v5)
 O² - EPA, ORD, Ada, OK (DIC, DOC using RSKSOP 330)
 O³ - EPA, ORD, Ada, OK (C1 using RSKSOP 175v5 and Cali-5 gas sampling bags)
 R3 - U.S. EPA Region III Regional Laboratory, Fort Mead, MD (Diethylene glycol, triethylene glycol, tetraethylene glycol, and 2-butoxyethanol analysis by LC/MS/MS). This method is currently under development with no finalized SOP. EPA Methods 8000C and 8321 were followed for method development and QA/QC limits where applicable.
 R8¹ - U.S. EPA Region VIII Laboratory, Boulder, CO (Fluoride, Chloride, Nitrite-N, Nitrate-N, Orthophosphate-P, and Sulfate using EPA Method 300.0 and EPA Region SOP 310, alkalinity determined using EPA Method 310.0)
 R8² - U.S. EPA Region VIII Laboratory, Boulder, CO (VOCs determined using EPA Method 8260B)

R8³ - U.S. EPA Region 8 Laboratory, Boulder, CO (SVOCs using EPA Method 8270D)

R8⁴ - U.S. EPA Region VIII Laboratory, Boulder, CO (DRO using Modified EPA Method 8015B)

R8⁵ - U.S. EPA Region VIII Laboratory, Boulder, CO (dissolved C1 in Phase I and dissolved C1-C3 in Phase II using EPA Method 524.2)

S¹ - Shaw Inc, Ada, OK (metals and metals speciation using RSKSOP 213v4,257v2, 297v1, and 298v1)

S² - Shaw Inc, Ada, OK (aromatics, and chlorinated hydrocarbons using method RSKSOP-259v1)

S³ - Shaw Inc, Ada, OK (alcohols, aromatics, and chlorinated hydrocarbons using method RSKSOP-259v1)

S⁴ - Shaw Inc, Ada, OK (low molecular weight acids using RSKSOP-112v6)

S⁵ - Shaw Inc, Ada, OK (dissolved gases C1-C4 using RSKSOP 194v4 & 175v5)

S⁶ - Shaw Inc, Ada, OK (hydrogen and oxygen isotope ratios using RSKSOP-296v0)

Analytical Methods

Isotech SOP 100v0 - Off line hydrocarbon gas preparation of system, Gamma bench, 12/27/2010.

Isotech SOP 101v0 - Off line gas preparation systems, Alpha Bench, 10/21/2003

Isotech SOP 103v0, Delta plus mass spectrometer dual inlet analysis of δD, 2/22/2010

Isotech SOP 104 - Delta S mass spectrometer, dual inlet analysis of δ¹³C, in preparation

Isotec SOP111v0, Gas chromatograph-Shimadzu[®]34, 9/29/2010

Isotech SOP 112v2 - ¹³C/¹²C Determination of DIC, 5/26/2011

Isotech (Beta Analytic) - Accelerated mass spectrometry (AMS) for radiocarbon (samples are prepared by Isotech prior to sending to Beta Analytic)

RSKSOP-112v6 - Standard Operating Procedure for Quantitative Analysis of Low Molecular Weight Acids in Aqueous Samples by High Performance Liquid Chromatography, 22 p.

RSKSOP-175v5 - Sample Preparation and Calculations for Dissolved Gas Analysis in Water Samples Using a Gas Chromatography Headspace Equilibration Technique, 16 p.

RSKSOP-194v4 - Gas Analysis by Micro Gas Chromatographs (Agilent Micro 3000), 13 p.

RSKSOP-213v4 - Standard operating procedure for operation of Perkin Elmer Optima 3300 DV ICP-OES, 21 p.

RSKSOP-214v5 - Quality control procedures for general parameters analysis using Lachat Flow Injection analysis (FIA), 10 p.

RSKSOP-259v1 - Determination of volatile organic compounds (fuel oxygenates, aromatic and chlorinated hydrocarbons) in water using automated headspace gas chromatography/mass spectrometry TEKMAR 7000 HS-Varian 2100T GC/MS system-ION trap detector, 28 p.

RSKSOP-257v2 - Standard operating procedure for elemental analysis by ICP-MS, 16 p.

RSKSOP-276v3 - Determination of major anions in aqueous samples using capillary ion electrophoresis with indirect UV detection and Empower 2 software, 11 p.

RSKSOP-296v0 - Determination of hydrogen and oxygen isotope ratios in water samples using high temperature conversion elemental analyzer (TC/EA), a continuous flow unit, and an isotope ratio mass spectrometer (IRMS), 8 p.

RSKSOP-297v1 - Metals Speciation Determination by LC/ICP-MS, 21 p.

RSKSOP-298v1 - Arsenic Speciation Determination by LC/ICP-MS with Anion Suppression and NaOH Mobile Phase, 21 p.

RSKSOP-330v0 - Determination of Various Fractions of Carbon in Aqueous Samples Using the Shimadzu TOC-VCPh Analyzer, 16 p.

U.S. EPA Method 300.0, Determination of inorganic anions by ion chromatography, 8/1993.

U.S. EPA method 310.1 (titrimetric, pH 4.5) in Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983

U.S. EPA Method 8260B - Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), 12/1996.

U.S. EPA Method 8015B - Determination of nonhalogenated organics using GC/FID, Revision 2

U.S. EPA Method 8015D "Nonhalogenated Organics Using GC/FID," revision 4, May 2003

U.S. EPA Method 8270D - Determination of semivolatile organic compounds by gas chromatography/mass spectrometry (GC/MS), Revision 4

U.S. EPA Method 8000C - Determinative chromatographic separations